

**-- REMARKS --**

The present amendment replies to an Office Action dated December 5, 2007.

Claims 1-24 are pending in the present application. Claims 14-21 were withdrawn. Claims 1, 2, 5, 6, 10, 11, and 12 have been amended, claims 22-24 cancelled, and claims 25-27 added herein. In the Office Action, the Examiner rejected claims 1-13 and 22-24 on various grounds. The Applicants respond to each ground of rejection as subsequently recited herein and request reconsideration of the present application.

**Drawings**

The drawings were objected to under 37 CFR 1.83(a) for failing to show every feature of the invention specified in the claims, specifically in claims 22-24. Claims 22-24 have been cancelled herein to expedite prosecution and not to avoid any cited reference. Withdrawal of the objection to the drawings is respectfully requested.

**35 U.S.C. §112 Rejections**

Claims 22 and 23 were rejected under 35 U.S.C. §112, second paragraph, for being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. Claims 22 and 23 have been cancelled herein to expedite prosecution and not to avoid any cited reference. Withdrawal of the rejection of claims 22 and 23 under 35 U.S.C. §112, second paragraph, is respectfully requested.

**35 U.S.C. §103 Rejections**

Obviousness is a question of law, based on the factual inquiries of 1) determining the scope and content of the prior art; 2) ascertaining the differences between the claimed invention and the prior art; and 3) resolving the level of ordinary skill in the pertinent art. *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). See MPEP 2143.03. The Applicant respectfully asserts that the cited references fail to teach or suggest all the claim limitations.

A. Claims 1-13 and 22-24 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,055,251 to Ouchi, *et al.* (the *Ouchi* patent).

The Applicants respectfully assert that the *Ouchi* patent fails to teach or suggest all the claim limitations of the rejected claims. The *Ouchi* patent fails to disclose, teach, or suggest a light source control system including, as recited in amended independent claim 1:

a plurality of light sources, each light source emitting both a light signal at a discrete frequency and a reference signal at the discrete frequency, each light source having a different discrete frequency;

a photodetector optically coupled to the plurality of light sources, the photodetector designed to receive the light signals for the plurality of light sources; and

a plurality of lock-in systems coupled to the photodetector to receive the light signals for the plurality of light sources, each lock-in system further being coupled to and associated with one of the plurality of light sources to receive the reference signal from the one of the plurality of light sources;

wherein each lock-in system produces an intensity value for the associated one of the plurality of light sources based on the light signals for the plurality of light sources and the reference signal from the associated one of the plurality of light sources.

At most, the *Ouchi* patent discloses a method and apparatus for frequency modulating a semiconductor laser including: a gain control signal to amplifier 407, which is automatically adjusted to suppress the effect of heat in a low modulation frequency band range; modulation current amplitude  $I_p$  of the driver IC 504 automatically controlled by a mixed output of a low pass filter 511 which is produced by the superposition of a sinusoidal wave signal of 100 Hz from a sinusoidal wave oscillator 506 and an output from a band pass filter 508 derived from a laser 501; and a gain control signal which automatically controls the gain of the amplifier 607 to cancel the effect of heat. *See* Figures 13, 15, 16; column 11, lines 32-36; column 12, lines 41-50; column 13, lines 4-14. The *Ouchi* patent does not disclose a variable gain control to the inverting wideband video amplifier 406, driver IC 503, or amplifier 606, and so fails to disclose a plurality of lock-in systems as claimed.

Claims 2-13 depend directly or indirectly from independent claim 1. Therefore, the dependent claims include all the elements and limitations of independent claim 1. The Applicants respectfully submit that dependent claims 2-13 are allowable over the *Ouchi* patent for at least the same reasons as set forth above with respect to independent claim 1.

Regarding dependent claim 9, the Applicants respectfully disagree with the Examiner's assertion that the *Ouchi* patent discloses a plurality of lock-in devices. At most, the *Ouchi* patent discloses variable gain control to one control circuit as discussed above for independent claim 1.

Claims 22-24 have been cancelled herein to expedite prosecution and not to avoid any cited reference.

Withdrawal of the rejection of claims 1-13 under 35 U.S.C. §103(a) as being unpatentable over the *Ouchi* patent is respectfully requested.

New Claims

Claims 25-27 have been added herein to more particularly point out and distinctly claim the Applicants' invention. Claims 25-27 are allowable over the cited references for at least the reasons discussed above for independent claim 1. No new matter has been added with the inclusion of claims 25-27, which are supported in the specification at least on pages 4, 5, 9, and 11.

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Page 11 of 11

**SUMMARY**

Reconsideration of the rejection of claims 1-13 and consideration of claims 25-27 is requested. The Applicants respectfully submit that claims 1-13 and 25-27 fully satisfy the requirements of 35 U.S.C. §§102, 103, and 112. In view of the foregoing, favorable consideration and early passage to issue of the present application is respectfully requested.

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Respectfully submitted,  
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